DAFTAR PUSTAKA

Abdulraheem, S., Schütz-Fransson, U., Bjerklin, K., (2020) Teeth movement 12 years after orthodontic treatment with and without retainer: relapse or usual changes? *Eur. J. Orthod.*, 42(1): 52-59.

Adhikari, N., Aryal, Y. P., Jung, J., Ha, J., Chol, S., Kim, J., Lee, T., Kim, S., Yamamoto, H., Suh, J., An, C., Lee, Y., Sohn, W., An, S., dan Kim, J., (2020) Resveratrol enhances bone formation by modulating inflammation in the mouse periodontitis model. *J. Perio. Res.*, 56(4): 735-745.

Alhasyimi, A. A., Pudyani, P. P., Asmara, W., dan Ana, I. D., (2018) Enhancement of post-orthodontic tooth stability by carbonated hydroxyapatite-incorporated advanced platelet-rich fibrin in rabbits. *Orthod. Craniofacial Res.,* 21(2): 112-118.

Alqahtan, I. M., Azizkhan, R. A., Alyawer, L. T., Alanazi, S. S., Alzahrani, R. A., Alhazmi, L. S., Bsher, F. F., Zahran, L. M., Aljahdali, R. A., Alqwizany, R. R., dan Tayeb, R.K., (2021) An overview of diagnosis and management of malocclusion: Literature review. *Ann. Dent. Spec.*, 8(4): 62–68.

Alrehaili, R., Alhujaili, A., Alharbi, S., Alharbi, N., Alghamdi, A., Alotaibi, R., Alzahrani, A., Alzahrani, A., Alharbi, H., Alharbi, A., dan Alharbi, A., (2024) Medications and Orthodontic Tooth Movement: What Accelerates and Diminishes Tooth Movement? *Cureus,* 16(6): e61840.

Andriani, I., Meiyanto, E., Suryono, S., dan Ana, I.D., (2020) The combination of carbonate hydroxyapatite and human β-defensin 3 to enhance collagen fibre density in periodontitis Sprague Dawley rats. *Dent. J*, 53(2): 76–80.

Anjani, N. R., Roelianto, M., dan Mooduto, L., (2021) Osteoinduction Ability Of Human Adiposed Derived Mesenchymal Stem Cell (HADMSC) with Chitosan Scaffold Combination Towards Blood Serum Phosphorus Levels. *J. SCRTE,* 5(2): 72-79.

Aurelia, S. C., Dermawan, T., M., Akifah, T. F., dan Pakpahan, E. L., (2024) Relaps After Orthodontic Treatment. *MIRSHuS,* 4(2): 238-250.

Bejenaru, L.E., Bejenaru, C., Crețu, G., Crețu, A.E., Negrei, C., Boda, G., Ozon, E.A., Popa, D.E., Bălălău, C., Bălălău, O., dan Bălălău, A.D., (2024) Resveratrol: A Review on the Biological Activity and Applications. *Appl. Sci.,* 14(11): 4534.

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., dan Walker, K., (2020) Purposive sampling: complex or simple? Research case examples. *J. Nurs. Res*, 25(8): 652–661.

Chacón-Moreno, A., Ramírez-Mejía, M.J., dan Zorrilla-Mattos, A.C., (2022) Relapse and inadvertent tooth movement post orthodontic treatment in individuals with fixed retainers: A review. *Rev. Cient. Odontol.*, 10(3): 116.

Danz dan Degen, (2025) Selective modulation of the bone remodeling regulatory system through orthodontic tooth movement-a review. *Front. Oral Health*. 6: 1472711.

Donthi, M.R., Munnangi, S.R., Krishna, K.V., Saha, R.N., Singhvi, G., dan Dubey, S.K., (2023) Nanoemulgel: A novel nano carrier as a tool for topical drug delivery. *Pharmaceutics*. 15(1): 164.

Du, Y., Xu, B., Li, Q., Peng, C., Yang, K., (2024) The role of mechanically sensitive ion channel Piezo1 in bone remodeling. *Front. Bioeng. Biotechnol.* 12: 1342149.

Elih, (2015) Relapse and Retention After Orthodontic Treatment. *Padjadjaran J. Dent.,* 27(3): 139-148.

Eroschenko, V.P., (2013) *Di Fiore's Atlas of Histology with Functional Correlations*. 12th ed. Baltimore: Wolters Kluwer Health. pp. 71–73.

Faccini, M., Agostini, F., Drieu, T., de Campos, F.U.F., Garcez, A., Carinhena, G.F., Salmeron, S., Casaroto, A.R., Valarelli, F.P., dan Freitas, K.M.S., (2021) Preliminary Histological Evaluation of the Application of Ozone in the First Days of Orthodontic Force Induction in Animal Model. *Eur. J. Dent.*, 16(1): 122–129.

Farhad, S. Z., Karbalaeihasanesfahani, A., Dadgar, E., Nasiri, K., Mohammad Hosseini, N., Valian, N., Esfahaniani, M., dan Nabi Afjadi, M., (2025) Promising potential effects of resveratrol on oral and dental health maintenance: a comprehensive review. *Naunyn-Schmiedeb. Arch. Pharmacol.*, 398: 1367–1389.

Golshah, A., Mohammadi, P., dan Golshah, A., (2021) Gingivitis effectiveness of emulgel containing 2% resveratrol in orthodontic patients: an 8-week randomized clinical trial. *Int. J. Dent.* p. 6644885.

Hadi, A. F. N., Aghniya, S. N., Haidar, G. A., Sihombing, W. S. M., Sutedjo, A., dan Alhasyimi, A. A., (2024) Post-Orthodontic Relapse Prevention through Administration of a Novel Synthetic Carbonated Hydroxyapatite–Chitosan Hydrogel Derived from Blood Cockle Shell (Anadara granosa L.). *Dent. J.*, 12(1): 1-13.

Hassan, M. G., Zaher, A. R., Palomo, J. M., dan Palomo, L., (2018) Sclerostin Modulation Holds Promise for Dental Indications. *Healthcare*. *6*(4): 134.

Hosseini, S., Diegelmann, J., Flowaczny, M., Saggabh, H., Otto, S., Kakoschke, T. K., Wichelhaus, A., Baumert, U., Rankovic, M. J., (2025) Investigation of Oxidative-Stress Impact on Human Osteoblasts During Orthodontic Tooth Movement Using an In Vitro Tension Model. . *Int. J. Mol. Sci*. 25: 13525.

Ilchovska, D. D. dan Barrow, D. M., (2021) An Overview of the NF-κB Mechanism of Pathophysiology in Rheumatoid Arthritis, Investigation of the NF-κB Ligand RANKL and Related Nutritional Interventions. *Autoimmun. Rev.*. 20(1):102741.

Inayah, Y., Horax, S., Fajriani, Marhamah, dan Erwansyah, E., (2021) Malocclusion: prevention and treatment during growth and development. *Makassar Dent. J.*. 10(3): 264–267.

Inchingolo, F., Inchingolo, A.M., Ceci, S., Carpentiere, V., Garibaldi, M., Riccaldo, L., Di Venere, D., Inchingolo, A.D., Malcangi, G., Palermo, A., Tartaglia, F.C., dan Dipalma, G., (2023) Orthodontic relapse after fixed or removable retention devices: A systematic review. *Appl. Sci.*. 13(20): 11442.

Inchingolo, F., Inchingolo, A.M., Latini, G., Ferrante, L., Trilli, I., Vecchio, G. D., Palmiere, G., Malcangi, G., Inchingolo, A. D., Dipalma, G., (2023) Oxidative Stress and Natural Products in Orthodontic Treatment: A Systematic Review. *Nutrients*. 16(1): 113.

Jeon, H.H., Teixeira, H., dan Tsai, A., (2021) Mechanistic insight into orthodontic tooth movement based on animal studies: A critical review. *J. Clin. Med.* 10(8): 1733.

Jeon, H.H., Yang, C.Y., Shin, M.K., Wang, J., Patel, J.H., Chung, C.H., dan Graves, D.T., (2021) Osteoblast lineage cells and periodontal ligament fibroblasts regulate orthodontic tooth movement that is dependent on Nuclear Factor-kappa B (NF-κB) activation. *Angle Orthod*. 91(4):.455–463.

Jiang, Y., Luo, W., Wang, B., Wang, X., Gong, P., Xiong, Y., (2020) Resveratrol promotes osteogenesis via activating SIRT1/FoxO1 pathway in osteoporosis mice. *Life Sci.* 246:117422.

Kaleci, B. dan Koyuturk, M., (2020) Efficacy of Resveratrol in the Wound Healing Process by Reducing Oxidative Stress and Promoting Fibroblast Cell Proliferation and Migration. *Dermatol. Ther.* 33(6): e14357.

Keskin Oruç, K., & Aşır, F. (2025). Effects of resveratrol on orthodontic tooth movement in Wistar rats: a biochemical, histological and in silico study. *Folia morphologica*, 41117083.

Kumari, D., Karmakar, V., Sisinthy, S.P., Pandey, M., Jain, N., dan Gorain, B., (2025) Nanoemulsion and nanoemulgel-based carriers as advanced delivery tools for the treatment of oral diseases. *Drug Deliv. Transl. Res.*, 15: 1139–1155.

Kohli, N., Ho, S., Brown, S.J., Sawadkar, P., Sharma, V., Snow, M., (2018) Bone remodelling in vitro: Where are we headed?: -A review on the current understanding of physiological bone remodelling and inflammation and the strategies for testing biomaterials in vitro. *Bone,* 110: 38–46.

Lal, D.K., Kumar, B., Saeedan, A.S., dan Ansari, M.N., (2023) An Overview of Nanoemulgels for Bioavailability Enhancement in Inflammatory Conditions via Topical Delivery. *Pharmaceutics,* 15(4): 1187.

Li, Y., Jacox, L.A., Little, S.H., dan Ko, C.C., (2018) Orthodontic tooth movement: The biology and clinical implications. *Kaohsiung J. Med. Sci.,* 34(4): 207–214.

Li, L., Li, J., Wang, Y., Liu, X., Li, S., Wu, Y., Tang, W., Qui, Y., (2021) Resveratrol prevents inflammation and oxidative stress response in LPS-induced human gingival fibroblasts by targeting the PI3K/AKT and Wnt/β-catenin signaling pathways. *Genet. Mol Biol.* 44(3): e20200349.

Littlewood, S.J., Dalci, O., Dolce, C., Holliday, L.S., dan Naraghi, S., (2021) Orthodontic retention: what's on the horizon? *Br. Dent. J.*, 230(11): 760–764.

Liu, F., Wang, N., Zhang, Y., Wang, L., Gu, H., Zhu, B., dan Liu, Y., (2020) Inhibitory effects of resveratrol on orthodontic tooth movement and associated root resorption in rats. *Arch. Oral Biol*. 111: 104648.

Ma, C., Wang, Y., Dong, L., Li, M., dan Cai, W., (2015) Anti-inflammatory effect of resveratrol through the suppression of NF-κB and JAK/STAT signaling pathways. *Acta Biochim. Biophys. Sin.* 47(3): 207-213.

Maltha, J.C., Vandevska-Radunovic, V., dan Kuijpers-Jagtman, A.M., (2015) The biological background of relapse of orthodontic tooth movement. *Biological Mechanisms of Tooth Movement*, 297–307.

Marian, D., Toro, G., D'Amico, G., Trotta, M.C., D'Amico, M., Petre, A., Lile, I., Hermenean, A., dan Fratila, A., (2025) Challenges and Innovations in Alveolar Bone Regeneration: A Narrative Review on Materials, Techniques, Clinical Outcomes, and Future Directions. *Medicina*, 61(1): 20.

Meng, T., Xiao, D., Muhammed, A., Deng, J., Chen, L., dan He, J., (2021) Anti-Inflammatory Action and Mechanisms of Resveratrol. *Molecules*, 26(1): 229.

Morii, A., Mitamura, Y., Sago, M. I., Mizuhara, M., Shikayama, T., Naniwa, M., Hitomi, S., Ujihara, I., Kuroishi, K. N., Gunjikage, K. K., Shiga, M., Morimoto, Y., Kawamoto, T., Ono, K. (2020) Orthodontic force-induced oxidative stress in the periodontal tissue and dental pulp elicits nociception via activation/sensitization of TRPA1 on nociceptive fibers. *Free Radic. Biol. Med.* 147:175–186.

Mulawarmanti, D., Andriani, D., Damaiyanti, D., Khoirunnisa, F., Juliatin, A., (2019) The effects of shark liver oil on fibroblasts and collagen density in the periodontal ligaments of Wistar rats induced with Porphyromonas gingivalis. *Dent. J.* 52(4): 209–214.

Nivaskumar, G.A., Kumar, M., dan Kumar, S., (2023) Effect of resveratrol pretreatment of radicular dentin on immediate and delayed pushout bond strength of fiber post luted using self-adhesive resin cement: An in vitro study. *J. Conserv. Dent. Endod.,* 26(5): 579–583.

Nugraha, A.P., Ernawati, D.S., Narmada, I.B., Bramantoro, T., Riawan, W., Situmorang, P.C., dan Nam, H.Y., (2023) RANK-RANKL-OPG expression after gingival mesenchymal stem cell hypoxia preconditioned application in

an orthodontic tooth movement animal model. *J. Oral Biol. Craniofacial Res.* 13(6):781–790.

Omi, M. dan Mishina, Y., (2022) Roles of osteoclasts in alveolar bone remodeling. *Genesis.* 60(9): e23490.

Othman, S.S., Saafan, A., Al-Halbosiy, M.M.F., Al-Shami, I., Al-Ghurabi, B.H., Al-Hijazi, A.A., Al-Juboori, M.J., dan Sulaiman, G.M., (2024) Ameliorating orthodontic relapse using laser bio-stimulation and mesenchymal stem cells in rats. *J. Genet. Eng. Biotechnol.*, 22(1): 100331.

Pagar, K. R. dan Darekar, A. B., (2019) Nanoemulsion: A new concept of Delivery System. *Asian J. Res. Pharm. Sci*. 9(1): 39-46.

Pawinru, A.S. dan Serliawati, (2021) Biomechanics of tooth movement. *Makassar Dent. J.*, 10(1): 82–87.

Prayogo, R.D., Sandy, B.N., Sujarwo, H., Fitri, K., Brahmanta, A., Rahardjo, P., dan Handayani, B., (2020) The changes of fibroblast and periodontal ligament characteristics in orthodontic tooth movement with adjuvant HBOT and propolis: A study in Guinea pigs. *Padjadjaran J. Dent.*, 32(1): 48–56.

Proffit, W.R., Fields, H.W., Larson, B.E. dan Sarver, D.M., (2019) *Contemporary Orthodontics*. 6th ed. St. Louis, Missouri: Elsevier. pp. 248–254.

Sharma, B., Iqbal, B., Kumar, S., Ali, J., dan Baboota, S., (2019) Resveratrol-loaded nanoemulsion gel system to ameliorate UV-induced oxidative skin damage: from in vitro to in vivo investigation of antioxidant activity enhancement. *Arch. Dermatol. Res.,* 311(10): 773–793.

Sokos, D., Everts, V., dan Vries, T. J., (2014) Role of Periodontal Ligament Fibroblast in Osteoclastogenesis: a Review. *J. Perio. Res.*, 50(2): 152.

Srivastava, R.K., Tandon, R., Singh, K., Chandra, P., dan Rohmetra, A., (2018) Retention and relapse: An anamnesis. *IP Indian J. Orthod. Dentofac. Res.,* 4(1): 13–20.

Sultan, M.H., Javed, S., Madkhali, O.A., Alam, M.I., Almoshari, Y., Bakkari, M.A., Sivadasan, D., Salawi, A., Jabeen, A., dan Ahsan, W., (2022) Development and Optimization of Methylcellulose-Based Nanoemulgel Loaded with Nigella sativa Oil for Oral Health Management: Quadratic Model Approach. *Molecules*, 27(6): 1796.

Truesdell, S. L. dan Saunders, M. M., (2019) Bone remodeling platforms: Understanding the need for multicellular lab-on-a-chip systems and predictive agent-based models. *Math. Biosci. Eng.*, 17(2): 1233-1252.

Valarmathy, S., Devi Damayanthi, R., Daisy Chella Kumari, S., Surya, S., Sri Vidhya, P., dan Vaishnavi Durga, G.K., (2024) Nanoemulgel: A Comprehensive Review for Topical Drug Delivery. *Int. J. Pharm. Phytopharm. Res.*, 30(2): 271–286.

Veginadu, P., Tavva, S.R., Muddada, V., dan Gorantla, S., (2020) Effect of pharmacological agents on relapse following orthodontic tooth movement: A systematic review of animal studies. *Angle Orthod.*, 90(4): 98–106.

Vikal, A., Maurya, R., Bhowmik, S., Khare, S., Raikwar, S., Patel, P., dan Kurmi, B.D., (2024) Resveratrol: A comprehensive review of its multifaceted health benefits, mechanisms of action, and potential therapeutic applications in chronic disease. *Pharmacol. Res. - Nat. Prod.* 3: p.100047.

Wang, Q., Timberlake II, M. A., Prall, K., dan Dwivedi, Y. (2017) The recent progress in animal models of depression. *Prog. Neuropsychopharmacol. Biol. Psychiatry,* 77: 99–109.

Xie, Y., Chan, U., dan Huang, Y., (2022) Research progress of animal models on orthodontic tooth movement. *Int. J. Appl. Sci. Res.*, 5(6): 70-75.

Yang, F., Wang, X. X., Ma, D., Cui, Q., Zheng, D. H., Liu, X. C., dan Zhang, J., (2019) Effects Of Triptolide On Tooth Movement And Root Resorption In Rats. *Drug Des. Dev. Ther.,* 13: 963–3975.

Yovanka, V., Kusnoto, J., dan Andayani, L. H., (2023) Characteristics of Orthodontic Appliance Users based on Demographics, Self-Perception, Psychosocial, and Oral Disorders (Study Among Undergraduate Students in West Jakarta). *J. Indones. Dent. Assoc.* 6(1): 9–14.

Yu, X., Jia, Y., dan Ren, F., (2024) Multidimensional biological activities of resveratrol and its prospects and challenges in the health field. *Front. Nutr.* 11: 1408651.

Zhai, M., Cui, S., Li, L., Chen, C., Zhang, Z., Liu, J., dan Wei, F., (2022) Mechanical force modulates alveolar bone marrow mesenchymal cells characteristics for bone remodeling during orthodontic tooth movement through lactate production. *Cells*, 11(23): 3724.